New Total Organic Carbon Detection Limit for Purposes of Reporting

Under the federal Stage 1 Disinfectants and Disinfection Byproducts Rule, a public drinking water system using a conventional filtration treatment plant is required to collect raw and treated water samples for total organic carbon (TOC) analysis. TOC analysis is to be performed using one of the three approved TOC methods. The minimum detection concentration for a method depends on the instrument used and laboratory attention to sample contamination. The methods and minimum detection concentrations are shown below.

Approved TOC Methods	Minimum Detection Concentration (mg carbon/L)
5310 B	1
5310 C	0.01
5310 D	0.10

From: Supplement to the 19th edition of Standard Methods.

As the TOC definition in the federal rule requires results to be reported to two significant figures, DDWEM-SRL has established a new TOC detection limit for purposes of reporting (DLR) of 0.30 mg carbon/L to standardize the reporting level. Laboratories that previously used a TOC DLR of 0.7 mg carbon/L now need to use the new DLR when analyzing TOC samples for compliance monitoring purposes under the federal rule. To meet the reporting requirement in the federal TOC definition, laboratories also need to do the following:

- For values that range from 0.30 – 0.99 mg carbon/L, report results to the nearest hundredth.
- For values greater than 0.99 mg carbon/L, report results to the nearest tenth.

For information concerning Analysis of Total Organic Carbon at Low Levels for Groundwater Recharge Reuse Projects, dated April 2003, please see the guidance document posted on the DDWEM web site at http://www.dhs.ca.gov/ps/ddwem/publications/waterrecycling/index.htm.